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A Report on

SIX DAYS GUJCOST SPONSORED WORKSHOP ON "APPLICATION OF NATURAL FIBRE REINFORCED COMPOSITES IN SMALL AND MEDIUM SECTOR"

OBJECTIVES OF THE PROGRAMME:

- To expose the concepts of composite materials and their applications.
- To learn various fabrication, testing and characterization techniques of composites.
- To introduce the mechanics and design concepts of composites using Finite Element Analysis.
- To implement Finite Element simulation using ANSYS software.
- To provide experience to the participants making the topic more clear.

EXPERT SPEAKERS:

- 1. Dr. A. A. Shaikh, Professor, SVNIT, Surat
- 2. Prof. Hitesh Jariwala, HOD, MED, J. H. Desai Polytechnic, Palsana.
- 3. Dr. Shailesh Patel, Research Scientist, Navsari Agricultural University.
- 4. Dr. Piyush Gohil, Associate Professor, MSU, Baroda.
- 5. Dr. Vijay Chaudhari, HOD, Charusat, Changa.
- 6. Ms. Kavita Kriplani, Dy. Director, GTU, Ahmedabad.
- 7. Dr. Chaitanya K. Desai, Associate Professor, CKPCET, Surat
- 8. Dr. Kundan Patel, Assistant Professor, Charusat, Changa
- 9. Mr. Alpesh Makwana, Assistant Professor, GEC, Dahod.
- 10. Prof. Ketan Panchal, GEC, Valsad

PARTICIPANT DETAILS: ANNEXURE-I

Total 56 Participants had participated from pre-final and final year students.

OUTCOME OF THE WORKSHOP:

- 1. The workshop was divided in six days:
 - Day 1 : Introduction to composite materials, different types of natural fibres and allied operations
 - Day 2: Industrial visit to Moldex composite Pvt. Ltd, GIDC, Sachin
 - Day 3: Industrial 4.0 implementation of natural composites
 - Day 4: Fracture characterization of composite materials
 - Day 5: Hybrid composites and micro-mechanical models
 - Day 6: Tribological behavior of composite materials

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- 2. Dr. A. A. Shaikh explained the basics of composite materials, natural fibres and allied operations associated with natural fibres composite materials one day 1.
- 3. Dr. Shailesh Patel explained the application of banana fibre in psuedostem applications carried out at Navsari Agricultural University with live examples on day 2.
- 4. On day 3, Dr. Piyush Gohil clearly explains about industrial 4.0 implementation of natural composites with examples. Also, Dr. Vijay Chaudhary and Ms. Manisha Kriplani explains the commercial as well as technical applications of composite materials.
- 5. Day 4 was fully devoted to the study of fracture mechanics and theory of composite materials by Dr. Chaitanya Desai.
- 6. The novelty in the composite materials, i.e hybrid composites concept was nicely introduced by Dr. Kundan Patel and Mr. Alpesh Makwana in detail on day 5.
- 7. On day 6, the session on tribological behavior of composite materials was fully explained by Prof. Ketan Panchal.

The sessions were interactive and all the speakers answered the queries of the participants in best possible manner.

WORKSHOP INVITATION: ANNEXURE II

WORKSHOP SCHEDULE: ANNEXURE III WORKSHOP

PHOTOGRAPHS: ANNEXURE IV WORKSHOP

BANNER: ANNEXURE V

WORKSHOP CERTIFICATES AND PARTICIPANT FEEDBACKS: ANNEXURE VI

INAUGURATION CEREMONY:

On 17th June 2019, the registration was done from 9:15 am onwards. After Tea, the Inauguration Ceremony started at 10:00am. Prof. Arif Varsi, Coordinator of the workshop started the program with an introduction of the workshop. The Principal and Convener of the workshop Dr. Piyush Jain invited all the participants and dignitaries for the Inauguration ceremony.



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ANNEXURE-I PARTICIPANTS DETAILS

V: J-	RESEARCH CENTRE -UMRAK			
	idyabharti Campus, At & Po Umrakh, Ta: Bardoli, Dist: Surat, Gujarat, India,			
Applic	cation of Natural Fibre Reinforced Composites for N			
100	Department : MECHANICAL ENGI	NEERING		
CD NO	Registration Student List			
SR.NO.	NAME	SIGN		
1	ASHOK KUMAR HARIRAM	Affair		
2	AMANKUMAR VERMA	-AM		
3	AHIRE KAILAS GHANSHYAM	Kerlant		
4	GANDHI JENISH PARESHKUMAR	andle		
5	AKSHAY TELORE	There		
6	MAHYAVANSHI MOHINI DILIPBHAI	volsain		
7	ANISH VERMA SUDAMA	A		
8	GAMIT JAYMEETKUMAR JITENDRABHAI	Jay		
9	CHAUDHARI MILAN JAYESHBHAI	(h)		
10	VISHWA DIPAK GAMIT	Poh		
11	RANA DHARMESH HIRALAL	Leur		
12	SHAH PRASHANT DHARMESH	CP		
13	SINGH RAJNISHKUMAR HARENDRA	Paymo		
14	GAMIT ASHISHKUMAR ANILBHAI	Adul		
15	CHAUDHARI TEJAS NANSINGBHAI	Desis		
16	DIYORA NIKUNJ PRAVINBHAI	Dir		
17	DEEPAK KUNDARAM	Doer		
18	LAD HARSHILKUMAR NITINBHAI	South		
19	ASTI HARSH DIPAK	Roules		
20	MEHTA RAHULKUMAR GAURANGBHAI	Low Mha		
21	GAVIT TEJAL AJIT	tent		
22	RAJWADI ROSHANKUMAR PARESHBHAI	Dotay.		
23	CHAUDHARI HARSHITKUMAR ARJUNBHAI	JOIALO		
24	CHAUDHARI TARKIKKUMAR UMESHBHAI	Sark		
25	YASHKUMAR HARSHADBHAI KHATRI	de .		
26	RANA HARSHIL BHARATBHAI	Harshil		
27	MAISURIYA SHIVANGBHAI MANOJBHAI	(front)		
28	PATRAWALA HASAN JUZER PATRAWALA	Fatranda		
29	PATHAN SHAHIDKHAN SOHELKHAN	Shus		
30	PATEL DIVYESHKUMAR SOMABHAI	Day		
31	VATSALKUMAR B MAISURIYA	Vail 1		
32	PATEL SHREYASH K.	Shreyes		
33	HALPATI JAYKUMAR RAMANLAL			
34	MALEK NURULABSAR JAFARHASAN	Malik		
35	PATEL PRATIKBHAI RAJESHBHAI	Prob		
36	GAMIT SANDIPKUMAR BHARATBHAI	mittle		
37	SHAH OMPRAKASH ASHOKKUMAR	pul		
38	VASAVA VIKESHBHAI GURAJIBHAI	Mest		
39	PRAJAPATI PRINKESHKUMAR BHARATBHAI	P. B. P.		
40	GOND ABHAYCHANDRA SUBHASHCHANDRA	Gento		
41	KURWADE FENIL CHANDRSHEKHAR	(Dein)		
42	VISHWANATH ASHARAM MANNADE	Mart		
43	PAREKH UTSAV BHARATBHAI	Home		



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45	SALVI SANKET SANDEEPBHAI	Cartut
46	SOLANKI VIKASKUMAR CHANDRAKANT	Vike
47	ABHISHEK AGARWAL	Abhuh
48	MAHARAUL ROHANSINH V.	Rohan
49	PARMAR MANIK K.	name
50	PATEL HIRAL J.	Herry
51	LAD ABHI R.	lad Alo
52	PRAJAPATI SWAPNIL A.	SIMOPA
53	SHARMA DUTT H.	Dutt
54	VAGHELA HET A.	Het
55	TRIVEDI ABHISHEK R.	Jamoli
56	Patel Rinkesh M.	PLI



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ANNEXURE II WORKSHOP TRIFOLD

The second of the second	Email: arif.varsi@snpitrc.ac.in	Centre, Umrakh-Bardoli, Surat
website : snpitre ac in	Phone: 942/895080	S. N. Patel Institute of Technology & Research
Umrakh-Bardoli, Surat	Bhan 0407905084	coordinators.
a resourch comie,	Centre, Umrakh-Bardoli, Surat	Registration form should be sent to the
& Posparch Contro	S. N. Patel Institute of Technology & Research	 Photocopies of registration form may be used. The
S. N. Patel Institute of Technolog	Asst. Prof., Mechanical Dept.	Institute of Technology & Research Centre"
Mechanical Engineering Departme	Prof. Arif Varsi,	 Cheque/DD should be in favor of "S. N. Patel
Organized by	ADDRESS FOR CORRESPONDENCE	
े स्कृत बहित पर	Prof. Misal Gandhi	Signature of Institute Signature of
	Prof. Hiten Mistry	
SNPITRO	Prof. Ripal Patel	
N. C.	Prof. Milan Patel	Food: Regular Dain
	Prof. Vishal Dhimmar	Place:
}	Committee Members	Date:
FIGI. AIII VOISI	Prof. Arif Varsi	Name of the Bank:
Prof Arif Variation	Dr. Piyush Jain	Date:
Dr. Pivush Jain	Coordinators	Cheque / DD No.:
Coordingtors	(Campus Director)	Cash/Cheque/DD Amt:
Department of Science & Technology Department of Science & Technology Government of Gujarcat Technology (GUJICO)	Dr. Ajay V Shah	Registration Fee: Paid herewith in the form of
	(Co-Secretary)	Email:
	Shri Ashwinbhai H. Patel	Tel./Mobile No.:
•	(Secretary)	Mailing Address:
Season of the se	Shri Kiritbhai N. Patel	Organization:
Sponsored By	(Managing Trustee)	Educational qualification:
	Shri Manharbhai L. Patel	Designation:
	Patrons	Name:
	ORGANIZING COMMITTEE	(17 th - 22 rd June, 2019)
Small and Medium Sector		Composites in Small and Medium Sector
Reinforced Composites in	 Mechanical Engg. Dept., MSO, Baroda. Prof. Vijaykumar Chaudhary, Professor 	Application of Natural Fibre Reinforced
Application of Natural Fibre	+ Dr. Piyush Gohil, Associate Professor,	Six Days Workshop
on on		Research Centre, Umrakh-Bardoli, Surat
	+ Dr. A. A. Shaikh, Professor, Mechanical	REGISTRATION FORM S. N. Patel Institute of Technology &
	TECHNICAL ADVISORY COMMITTEE	



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ABOUT THE INSTITUTE

aspirations of the bright youth of our dedicated to nurture the talent and symbol of quality education associated with education for more Vidyabharti Trust is the name Surat district and has now evolved as a than three decades near Bardoli of

& communication (E&C) and Electronics & Communication & and affiliated with Gujarat approved by the All India Council for S. N. Patel Institute of Technology & production engineering (Mechanical). management (Civil), signal processing courses in the area of construction Institute also offer post graduation Computer Science Engineering. Mechanical, Civil, Electrical, Chemical, to get talented Engineers in the field of Ahmedabad, Gujarat. It was foresight Technological University (GTU), Technical Education (AICTE), New Delhi Research Centre is a premier institution

ABOUT THE DEPARTMENT

VMCPX 20. teaching staff. The Department is having guidance of professional & experienced useful to all the stake holders under the professionals with integrity besides being innovative applications producing excellent excellence in technical education & 2008 with an aim to be global centre of

OBJECTIVES OF THE PROGRAMME

- characterization techniques of To learn various fabrication, testing and composites.
- To introduce the mechanics and design Element Analysis. concepts of composites using Finite

Academicians

To implement FE simulation using ANSYS software.

COURSE CONTENT

- Introduction to Composite Materials.
- Engineering applications of Composite Manufacturing techniques Materials.
- Testing and Characterization Mechanics

O

Mechanical Department was established in

- To expose the concepts of composite materials and their applications.

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- Introduction to FE simulation using ANSYS of Composite Materials

FOR WHOM

The program will provide excellent

Students/Teachers of engineering opportunities for

- colleges and polytechnics.
- Researchers working in relevant field. In service professionals / Engineers/

REGISTRATION FEE DETAILS

given below: The registration fees for participants are

Students **Participants** Amount (in Rs.) 500/-

RESOURCE PERSONS

Dr. Piyush Jain

Prof. Arif Varsi

IMPORTANT DATES

- Last date for Application 14/06/2019
- Confirmation of Seat 15/06/2019

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ANNEXURE III WORKSHOP SCHEDULE

Time	Theme		
	17 th June 2019		
9:30am-10:00 am	Registration		
10:00 am 10:30am	Inauguration		
10:30 am -12:00 pm	Composite material concepts and its classification	Prof. Arif Varsi Asst. Prof. MED SNPITRC, UMRAKH	
12:00 pm - 1:00 pm	Lunch		
1:00 pm - 2:30 pm	Different types of fibres in composite materials	Prof. Hitesh Jariwala HOD, MED J. H. Desai Polytechnic, Palsana	
2:30 pm - 3:00 pm	Teα		
3:05 pm - 4:30 pm	Natural Fibre composites and allied operations	Dr. A. A. Shaikh Professor SVNIT, Surat	
Time Theme			
	18th June 20	19	
	Batch 1-Industrial visit	Moldex Composite Ltd. GIDC, Sachin	
10:30 am -12:30 pm	Batch 2-Value addition and processing of banana pseudo form and its fiber	Research Scientist Navsari Agricultural University	
12:30 pm – 1:30 pm	Lunch	,	
	Batch 2-Industrial visit	Moldex Composite Ltd. GIDC, Sachin	
1:30 pm — 3:00 pm	Batch 1-Value addition and processing of banana pseudo form and its fibre	Research Scientist Navsari Agricultural University	
Time	Theme		
	19 th June 2019		
10:30 am -12:00 pm	Industrial 4.0 implementation in composite sector	Dr. Piyush Gohil Associate Professor, MED Charusat, Changa	
12:00 pm — 1:00 pm Lunch			
1:00 pm - 2:30 pm	Machining of composites-Drilling of PMC	Dr. Vijay Chaudhari HOD, MED Charusat, Changa	
2:30 pm - 3:00 pm	Tea	,	
3:00 pm – 4:30 pm	Advanced Composite Material Simulation	Ms. Kavita Kriplani Dy. Director, GTU	
Time	Theme		
	20 th June 20	19	
10:30 am -12:00 pm	Fracture Characterization of Natural Fibre Composites-I	Dr. Chaitanya K. Desai Associate Professor CKPCET, Surat	
12:00 pm – 1:00 pm	Lunch		



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	Fibre Composites-II	Associate Professor	
		CKPCET, Surat	
2:30 pm - 3:00 pm	Tea		
Time	Theme		
	21st June 2019		
	Development and Mechanical	Dr. Kundan Patel	
10:30 am -12:00 pm	Characterization of Natural Fibre	Assistant Professor	
	based hybrid composites	Charusat, Changa	
12:00 pm - 1:00 pm	Lunch		
1:00 pm – 2:30 pm	Hybrid Composites-Micro Mechanical modeling	Mr. Alpesh Makwana Assistant Professor Mechanical Engg. Dept. GEC, Dahod	
2:30 pm - 3:00 pm	Tea		
3:00 pm – 4:30 pm	Finite Element Analysis of Composites	Khodiyar CAD Centre, Surat	
Time	Theme		
	22 nd June 2019		
10:30 am -12:00 pm	Tribological behaviour of composite materials	Prof. Ketan Panchal Asst. Prof GEC, Valsad	
12:00 pm – 1:00 pm	Lunch		
1:30 pm – 3:00 pm	Can composite materials replace the conventional materials?	Dr. Piyush Jain Prof. and Prinicipal SNPITRC, Umrakh	
3:00 pm - 3:30 pm	·		



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ANNEXURE IV PHOTOGRAPHS

A. INAUGURATION CEREMONY













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В. **SESSION PHOTOS**

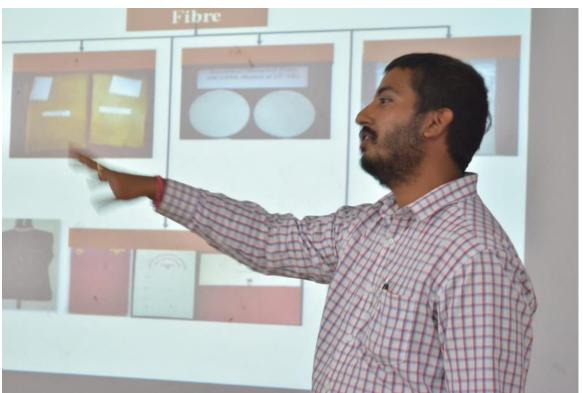






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C. **MOMENTO & CERTIFICATE DISTRIBUTION TO EXPERT SPEAKERS**







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D. FEEDBACK BY PARTICIPANTS







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E. GROUP PHOTO OF ALL PARTICIPANTS





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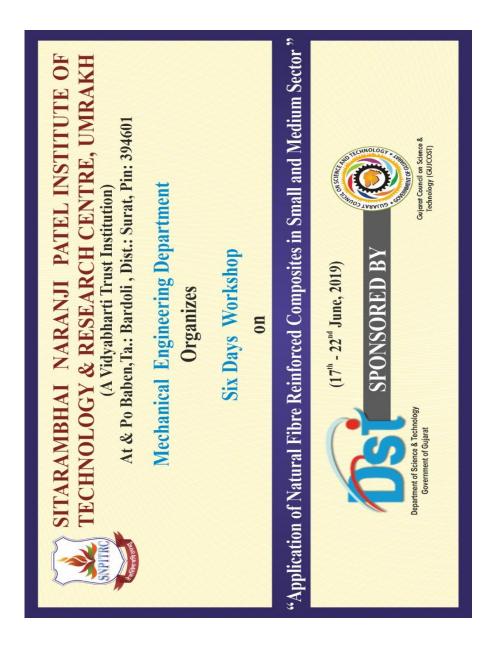
F. INDUSTRIAL VISIT





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ANNEXURE V WORKSHOP BANNER





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ANNEXURE VI CERTIFICATES

A. PARTICIPANTS CERTIFICATES







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B. COORDINATOR CERTIFICATES





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SITARAMBHAI NARANJI PATEL INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE. UMRAKH

PRESS NOTE

Date: 14/06/2019"ATAL SAVERA"

ઉમરાખના મેકેનિકલ એન્જિનિરીંગ વિભાગ ખાતે ગુજકોસ્ટ એન્ડ DST દ્વારા વર્કશોપ નું આયોજન

બારડોલી, તા. ૧૪

એસ એન પટેલ ઇન્સ્ટિટ્યૂટ ઓફ ટેક્નોલોજી એન્ડ રિસર્થ સેંટર, ઉમરાખ ખાતે ગુજરાત કાઉન્સિલ ઓફ સાયન્સ એન્ડ ટેક્નોલોજી અને department ઓફ સાયન્સ ઓફ ટેક્નોલોજી (DST), Govt. of Gujarat sponsroed વર્કશોપ નું આયોજન કરવામાં આવેલ છે. તા. ૧૭ - ૨૨ જૂન ૨૦૧૯ દરમિયાન "Application of Natural Fibre Reinfroced Composites in Small and Medium Sectro" પર ૬ દિવસ નું વર્કશોપ નું આયોજન કરવામાં આવેલ છે. ગુજરાત ની પ્રતિષ્ઠિત સંસ્થા માંથી નિષ્ણાંત પ્રોફેસર ઉપસ્થિત રહી વિદ્યાર્થી અને ફેકલ્ટીસ ને માર્ગદર્શન આપશે. વધુ માહિતી માટે www.snpitrc.ac.in ની મુલાકાત કરવા જણાવાયું છે.